

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
30 September 2004 (30.09.2004)

PCT

(10) International Publication Number
WO 2004/082463 A3

(51) International Patent Classification⁷: **C12N 9/99**,
9/14, A61K 31/19

(21) International Application Number:
PCT/US2004/008129

(22) International Filing Date: 16 March 2004 (16.03.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/455,705 17 March 2003 (17.03.2003) US

(71) Applicant (for all designated States except US): **MEDICAL COLLEGE OF OHIO** [US/US]; 3035 Arlington Avenue, Toledo, OH 43614-5804 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **RATNAM, Manohar** [US/US]; 2266 St. Roberts Lane, Toledo, OH 43617 (US).

(74) Agents: **MARTINEAU, Catherine, B.** et al.; Emch, Schaffer, Schaub & Porcello Co. L.P.A., P.O. Box 916, Toledo, OH 43697-0916 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
9 September 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: FOLATE RECEPTOR GENE MODULATION FOR CANCER DIAGNOSIS AND THERAPY

(57) Abstract: A method of diagnosing and treating a patient with or suspected of having at least one solid tumor that produces folate receptor type α includes administering a biologically effective amount of at least one folate receptor α inducer, specifically steroid receptor ligands, with or without aid from at least one histone deacetylase inhibitor, to increase the level of the folate receptor α on the plasma membrane of cancer cells as well as the folate receptor α in at least one type of body fluid, including, for example, serum, ascites and cerebrospinal fluid.



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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/08129

A. CLASSIFICATION OF SUBJECT MATTER IPC(7) : C12N 9/99, 9/14; A61K 31/19 US CL : 435/184, 195, 197; 530/387.9; 514/557 According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) U.S. : 435/184, 195, 197; 530/387.9; 514/557 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Please See Continuation Sheet		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	TROPE et al. Tamoxifen in the treatment of recurrent ovarian carcinoma. European Journal of Cancer. 2000, Vol. 36, pages S59-S67, especially page S59.	1, 6-9, 14, 17, 18, 24, 25, 28, 34, 35, 38, 44, 45, 48, 54, 55 and 58
Y	US 6,387,673 B1 (EVANS et al) 14 May 2002 (14.05.2002), column 3, line 53- column 4, line 28, column 5, lines 26-45, and column 15 - column 16.	1, 6-9 and 12-63
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
* Special categories of cited documents:		
"A"	document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E"	earlier application or patent published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O"	document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P"	document published prior to the international filing date but later than the priority date claimed	
Date of the actual completion of the international search 24 June 2005 (24.06.2005)		Date of mailing of the international search report 19 JUL 2005
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230		Authorized officer Anne Holleran <i>[Signature]</i> Telephone No. (571) 272-1600 <i>[Signature]</i>

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US04/08129

Continuation of B. FIELDS SEARCHED Item 3:
Medline, Embase, Biosis, Caplus, US Patents Database in EAST
search terms: tamoxifen, ovary, ovarian, folate receptor, induction, dexamethasone, trichostatin

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/08129

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☒ Claims Nos.: 10 and 11
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☐
☐

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.